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FRANCHISE CHAINS AND REGIONAL DEVELOPMENT: AN INSTITUTIONAL ANALYSIS OF BRAZILIAN CENTRAL-WEST

Augusto Cezar DArruda[1], Pedro Lucas de Resende Melo[1]*, Diego Bonaldo Coelho[2], Maria Carolina Silva de Arruda[1]

[1]Universidade Paulista – São Paulo (SP), Brazil.

[2]Fundação Instituto Administração – São Paulo (SP), Brazil.

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ABSTRACT

Objective: This article is a part of studies designed to investigate variables in the institutional environment that are significant for the expansion strategy of franchise chains, with a focus on inland regions. The objective is to identify variables that impact the attractiveness of the institutional environment for the insertion of franchise chains. **Method:** Quantitative exploratory research was carried out, using secondary data from IBGE, with 14 variables, in a sample of 220 cities in the Brazilian center-west. **Main Results:** Statistical analysis indicated that the dimensions of education, economy and regional development have a positive and significant impact on attracting franchise chains. **Relevance / Originality:** To this end, five dimensions of the institutional environment were analyzed: education, regional development, health, business and economy. **Theoretical / Methodological Contributions:** The results contribute to the theory as it assists in strategic decision-making regarding the expansion of franchise chains and suggests new and relevant research segments with emphasis on the exploration of factors in the institutional environment. The article also contributes to neo-institutional theories, as it offers a relevant and well-founded explanation of the impact of institutional factors in attracting business models such as franchise chains to inland regions.

Keywords: Franchise Chains, Regional Development, Institutional Environment, Entrepreneurship.

REDES DE FRANQUIAS E DESENVOLVIMENTO REGIONAL: UMA ANÁLISE INSTITUCIONAL DO CENTRO-OESTE BRASILEIRO

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RESUMO

Objetivo: Este artigo é parte de um estudo que investigou variáveis do ambiente institucional relevantes para a estratégia de expansão de redes de franquias, com foco no interior do país. O objetivo foi identificar variáveis que impactam a atratividade do ambiente institucional para a inserção de redes de franquias. **Método:** Foi realizada uma pesquisa exploratória quantitativa com dados secundários do Instituto Brasileiro de Geografia e Estatística, com 14 variáveis, em uma amostra de 220 cidades da Região Centro-Oeste brasileira. **Principais Resultados:** A análise estatística indicou que as dimensões educação, economia e desenvolvimento regional impactam positiva e significativamente a atração de redes de franquias. **Relevância / Originalidade:** Foram analisadas cinco dimensões do ambiente institucional: educação, desenvolvimento regional, saúde, negócios e economia. **Contribuições Teóricas / Metodológicas:** Os resultados contribuem para a teoria, pois auxiliam na tomada de decisões estratégicas quanto à expansão de redes de franquias e sugerem novos e relevantes segmentos de pesquisa, com ênfase na exploração de fatores do ambiente institucional. O artigo também contribui para as teorias neoinstitucionais, pois oferece uma explicação relevante e bem fundamentada sobre o impacto de fatores institucionais na atração de modelos de negócios como redes de franquias para regiões do interior.

Palavras-chave: Redes de Franquias; Ambiente Institucional; Desenvolvimento Regional.

*Corresponding author: pedro.melo@docente.unip.br

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INTRODUCTION

Franchise chains are organizational systems with a contractual basis in which one party, the franchisor, gives to the other party, the franchisee, the right to offer products or services owned by the franchisor (Rubin, 1978). This business model was born as a strategy to provide rapid expansion of the company through raising funds from third parties.

Initially, expansion strategies targeted large urban centers with realities like those in which franchise units were already established in the market. However, with the saturation and high level of competition in these markets, this business model needed to expand to environments with different realities, starting a movement of expansion toward inland cities, with smaller population numbers (Melo et al., 2020).

The strategies used to expand franchise chains in inland regions is a topic that has recently been addressed in academic research (Flores Villanueva & Ramírez, 2020; Melo et al., 2020). The research emphasizes the understanding of the institutional environment as a strategic differential for expansion and a vector for increasing the possibility of success in its regional insertions (Bretas et al., 2019; Ndofirepi, 2024; Schüler, 2023; Stenholm, et al., 2013; Zuo et al., 2023).

Among the institutional aspects relevant to the attractiveness of franchise chains identified in previous studies, we can mention legal security (Aliouche & Schlentrich, 2011; Baena, 2015), intellectual property protection (Aliouche & Schlentrich, 2011; Baena, 2015; Shane, 1996), political governance (Hoffman et al., 2016; Meyer, 2001), and financial regulation (Hoffman et al., 2016). Recent studies highlight that regional business attraction is not solely dependent on isolated institutional variables but rather on their interaction within an Entrepreneurial Ecosystem (EE) framework (Melo et al., 2025). This approach considers that factors such as financial accessibility, local employment rates, and educational infrastructure are not independent predictors of franchise success, but rather interdependent components shaping regional business attractiveness.

However, analyzing these studies, most of them use large urban centers as samples. The institutional environment of large centers can be very different from the environment of inland regions, presenting discrepancies in terms of population, culture, infrastructure, access to suppliers and distributors, and public policies. In this sense, understanding and exploring significant factors present in environments in inland regions can be a differentiator in the insertion of new businesses in these regions, especially because large urban centers already present saturation and high competition, due to the geographic proximity of points of sale (Melo et al., 2020).

This study aims to address this theoretical gap by expanding studies that investigate environments outside major population areas capable of attracting new businesses (Flores Villanueva & Ramírez, 2020; Melo et al., 2020, 2023, 2025). Therefore, the objective of this work is to identify which institutional dimensions are significant in the attractiveness of franchise chains in inland regions. To this end, institutional environment variables related to five dimensions will be tested: education, business, health, economy, and regional development. These variables will be analyzed regarding their significance in the expansion of new franchise chains in environments with inland characteristics.

This research seeks to contribute to the advancement of institutional theory, especially the neo-institutionalist current (Acemoglu et al., 2001; Dimaggio & Powell, 1983), by demonstrating how institutional factors in less urbanized areas act not only as constraints but also as catalysts for franchise expansion. The incorporation of the EE perspective allows for a broader understanding of how institutional variables interact dynamically, rather than functioning in isolation, ultimately influencing the entrepreneurial landscape.

This advance occurs since this current relies on institutions as responsible for the economic growth of the regions, and this research identifies significant variables present in institutional environments of economic singularity and with isomorphic characteristics in the countryside, capable of revealing entrepreneurial opportunities for business models such as franchise chains. There is also a contribution in relation to studies that investigate environments outside major population areas capable of attracting new businesses (Flores Villanueva & Ramírez, 2020; Melo et al., 2023). By identifying key institutional factors and their interconnections, this study provides insights that can serve as a basis for policymakers to develop integrated strategies for regional economic development, fostering franchise expansion in inland

areas through synergies between financial accessibility, infrastructure, and workforce development.

Thus, this research contributes to institutional theory by moving beyond the traditional analysis of isolated institutional factors and integrating them within an EE framework. This perspective allows for a more dynamic understanding of how institutional variables interact, offering new insights into franchise expansion strategies in inland regions. The article is structured as follows: introduction, literature review, hypotheses, methodology, results, and final considerations.

1. LITERATURE REVIEW

1.1. Franchise chains and institutional environment

Franchise chains can be defined as a legal contract between two parties, the franchisor and the franchisee. On the one hand, the franchisor grants the brand and its right to use it with the necessary support, while the franchisee commits to paying royalties and specific fees that are negotiated considering the specificity of the business (Norton, 1988; Rubin, 1978). This business model provides rapid insertion into the market, as there is already a tested brand or product, and it is easy to start a new business. There is a large-scale administration of financial, administrative, and personal resources (Melo et al., 2015).

There are two main ways of expanding franchise chains: through the establishment of their own points of sale and through the establishment of franchised points of sale (Shane, 1996). This topic has been the subject of study in articles with the purpose of investigating the relevant aspects that can impact the expansion strategy (Aliouche & Schlentrich, 2011; Melo et al., 2019; Melo et al., 2015). One of the aspects that can influence the chain strategy is the institutional environment of the destination region because the efficient and effective functioning of formal and informal rules as execution and coordination mechanisms determines the transaction costs of the operation in the environment, directly impacting its attractiveness to companies (North, 1991).

Institutions can be defined as human inventions created to structure political, economic, and social interactions, which define the "rules of the game" (North, 1990). These rules influence companies' behavior when choosing new markets (Hoskisson et al., 2000; Meyer, 2001; Meyer et al., 2009; North, 1990, 1991).

Institutions determine which strategic options a company can implement to achieve its objectives (Hoffman et al., 2016; Meyer et al., 2009). The institutional environment encompasses the formal and informal rules and requirements that organizations need to follow to gain legitimacy (Zoogah et al., 2015). Formal rules are reflected in legal, political, regulatory, and economic guidance, determining property rights and channels of access to finance. Informal rules designate patterns of behavior related to trust, collaboration, social codes of conduct, culture, and ideology (Meyer et al., 2009; North, 1990, 1991; Schwens et al., 2011). To achieve the objective pursued in this article, the formal rules of the institutional environments analyzed will be explored.

An emerging perspective in this field is the EE framework (Melo et al., 2025), which emphasizes the interrelation between institutional factors rather than analyzing them in isolation. Instead of considering factors such as employment, financial availability, and education separately, the EE perspective suggests that their combined effect is crucial for franchise success. Studies indicate that while employment and financial access may positively influence franchise growth, their effects become more pronounced when combined with strong educational institutions and local business networks (Melo et al., 2025). This perspective provides a more dynamic and holistic understanding of the institutional environment's role in fostering franchise expansion.

Five environmental dimensions were selected based on theoretical evidence regarding the endogenous significance of these structural elements in society: education, business, economic, regional development, and health. The dimensions of this article were selected based on the observation of recent research that converges on the themes of franchise chains, regional development, and institutional environment, and because they are present in studies involving factors of the institutional environment that impact new businesses (Bergmann et al., 2016; Melo et al., 2023, 2025; Muller, 2016). Thus, the dimensions were defined with the objective of covering formal indicators capable of measuring social and economic aspects of regions far from large urban centers. By adopting an EE-informed approach, this study not only reinforces

previous institutional analyses but also introduces a more integrative perspective on how franchise expansion strategies should be designed for inland regions. Understanding how financial access, education, and employment interact can help businesses and policymakers enhance the attractiveness of nonmetropolitan markets for franchise investment. Therefore, the selection of these dimensions directly contributes to studies of environments for attracting new businesses outside large urban centers, impacting the regional development of these locations by filling theoretical gaps.

2. HYPOTHESES

The objective of this article is to identify which institutional dimensions are significant for the insertion of franchise chains in inland regions. To achieve this objective, five hypotheses were developed, each related to one of the dimensions to be addressed in the research: education, business, health, regional development, and economy.

2.1. Regional development dimension

Regional development is a concept with multiple meanings, but it can be defined as a general effort to reduce regional disparities by supporting economic activities that influence the generation of jobs and wealth at the regional level (Bălăceanu et al., 2021). This concept can also be seen as something systemic in which complex aspects other than just economic ones are considered, such as political, social, and cultural issues that represent, based on the degree of evolution, the quality of the region (Boisier, 1996; Muller, 2016).

The search to understand how formal institutions can shape business attraction has been a relevant issue for regional development (Melo et al., 2023). Thus, the characteristics of regional development discernible from the analysis of different intrinsic variables, whether with a social, political, economic, environmental, or cultural scope (Galvão et al., 2020), are indicators that can be used to evaluate the attraction environment of new businesses.

For example, one of the most used indicators to measure this dimension is the Human Development Index (HDI) as it represents the combination of three determining variables in the institutional environment, health, education, and income, in an intrinsic way. Another variable related to this dimension is demographic density as it is a result of the economic and social attractiveness of the region (Melo et al., 2023). Hence, it is possible to understand that regional development can influence the level of competition and consumption behavior, being related to future consumption potential and market attractiveness.

The regional development construct is used in research that investigates the attraction of franchise chains in addition to the analysis of economic, demographic, human resources, and business dimensions to characterize the sample environment (Melo et al., 2020, 2023). It is understood that this dimension is relevant for franchise chains as it influences the generation of jobs and wealth at a regional level and, consequently, the potential of the consumer market and the attractiveness of the market (Bălăceanu et al., 2021; Muller, 2016). Therefore, the following research hypothesis was developed:

H1: The higher the regional development indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil.

2.2. Economic dimension

The economic dimension corresponds to the level of economic activity in the region (Sendra-Pons et al., 2022), including variables such as degree of financial movement, number of financial institutions present, average salary, and access to financing (Huang et al., 2023; Sendra-Pons et al., 2022; Utama et al., 2024).

Due to the great inequality in terms of economic development between centralized regions and inland regions, one of the major concerns of companies is understanding the functioning of the local economy (Cutsinger & Holcombe, 2019). This understanding can reduce environmental risks for both entrepreneurs and public managers when developing effective strategies to attract new businesses to promote the region's development.

The economic dimension, together with positive economic institutions, plays a prominent role in the economic growth of regions by helping to reduce environmental uncertainties and bringing with it other benefits that contribute to the development of re-

gions (Acemoglu et al., 2005; Kafka & Kostis, 2024; Utama et al., 2024).

Among the indicators used to analyze the economic dimension, we can mention GDP per capita as it allows evaluating the intensity of entrepreneurial activity and the attractiveness of regions for business expansion (Querino et al., 2022); average salary, which demonstrates the income of the region and reflects the purchasing power of the population; and scenario of financial institutions, which indicates the population's potential to have access to credit (Balan et al., 2016; Kilonzo et al., 2017; Kitali et al., 2015; Mendoza-Abarca et al., 2015). These indicators are important because they are correlated with purchasing power and economic stability.

Specifically, in relation to franchise chains, as the sector is dominated by services or products associated with services, the importance of a viable economy and disposable income are crucial for the growth of commercial activity. This occurs because high income allows consumers to pay for services instead of performing them (Baena & Cerviño, 2014).

Economic uncertainty increases the transaction costs associated with entering a given market, increasing the perceived risk on the part of franchisors, who are less likely to expand in markets without favorable economic growth. This occurs due to possible resource scarcity and reduced profits. Therefore, the economic dimension is one of the most important dimensions for franchise chains as it is correlated with purchasing power and economic stability, and, consequently, with expected profit and estimated costs, with companies preferring markets with a low level of economic uncertainty to avoid risks (Baena, 2015; Hoffman et al., 2016; Melo et al., 2019). Based on the above, the following hypothesis was developed:

H2: The higher the economic indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil.

2.3. Education dimension

The education dimension is responsible for shaping the human capital of environments, influencing the performance and productivity of workers (Eberhardt & Ferrera de Lima, 2012; Fonseca et al., 2013; Paschoalino et al., 2016). Different studies address the importance of education for the institutional environment in attracting new businesses. It is a moderating instrument of the institutional environment in relation to entrepreneurial intention as it reflects the qualification of the workforce (Floris et al., 2020; Melo et al., 2023; Zhuang & Sun, 2023), increases performance and worker productivity, makes the environment more competitive (Aleksei et al., 2019; Fonseca et al., 2013; Paschoalino et al., 2016), fosters creation and innovation (Chen et al., 2019), and stimulates socioeconomic development (Aleksei et al., 2019). Therefore, the education dimension stands out as a determining institutional factor in entrepreneurship.

The expansion of franchise chains involves costs in hiring qualified people to occupy different positions, whether employees or managers, in the expansion locations (Chung et al., 2007). In places with better educational rates, there are greater chances of reducing employee selection and hiring costs. Thus, indicators such as education rate and number of higher education institutions (HEIs) can have an impact on the choice of expansion locations.

Furthermore, education is an important characteristic given the nature of the franchise chain strategy. To build brand equity, an educated audience that can rationally discriminate between the many messages they receive for purchases or investments is essential (Hoffman & Preble, 2001). Previous studies have shown that places with a low educational level, together with an unskilled workforce, are associated with a low level of investment, so it is understood that these are not attractive markets (Stal & Cuervo-Cazurra, 2011). In small- and medium-sized municipalities in inland regions, qualified labor is scarce as the market is smaller, and as a result, people are not encouraged to invest in professional training, and, in many cases, move to large centers in search of opportunities (Kamakura & Mazzon, 2016). For franchise chains, this situation is also especially problematic as they rely on the know-how of the local franchisor for the success of the venture. Based on the above, the following hypothesis was developed:

H3: The higher the education indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil.

2.4. Business dimension

The business dimension is related to the degree of entrepreneurship, stimulating competition and innovation, and for this reason reflects the attractiveness of the market for opening new companies (Galvão et al., 2020; Muller, 2016). Some variables relating to this dimension are the number of active companies and the number of companies opened in the year, and these variables reflect the attraction of new businesses (Melo et al., 2023; Rompay et al., 2012; Wang et al., 2018).

An institutional business environment suitable for the insertion of new ventures provides resources and conditions necessary for individuals to identify market opportunities, initiate and develop new businesses, products, or services, and generate jobs, fostering economic growth (Bowen & De Clercq, 2008; Fuentelsaz et al., 2019; Muller, 2016), and is associated with an environment of innovation (Doan, 2023).

In relation to franchise chains, a positive business environment is related to the expansion strategy as it positively impacts the likelihood of the local population starting a business (Bergmann et al., 2016; Melo et al., 2019). The ease of doing business is one of the indicators that reflect market efficiency, so when the cost of opening a new business is relatively high, transaction costs increase, increasing the perceived risk. Accordingly, the lowest cost of starting a business is related to the business density in each economy so that the easier it is to do business in each market, the higher the business density (Meyer, 2001). For this research, the number of companies present in the region, the number of companies opened in the year 2023, and the number of employed people in the region were used as a way of measuring the size of the business. Given the above, the following hypothesis was formulated:

H4: The higher the business indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil.

2.5. Health dimension

Policies and actions related to the health dimension present advantages that go beyond the sector's central objective of providing general well-being to the population. Public health indices are a consequence of factors related to regional and social development, for example, income distribution, nutrition, sanitation, economic growth, and working conditions. Therefore, the variables that indicate the health of the population can be used to assess employment, income, and innovation conditions (Gadelha & Costa, 2012).

There is the concept that regions with positive health indices tend to transmit security for the insertion of new ventures as they propagate the notion of security to related parties in the market (Gadelha & Costa, 2012; Viana & Elias, 2007).

As examples of variables used to measure this dimension, we can mention the infant mortality rate, which demonstrates the power of environmental institutions and impacts on the economic growth of regions (Acemoglu et al., 2001), the health status of entrepreneurs, which impacts business success (Dvouletý, 2024), and regulations related to worker protection and consumer safety, which affect decision-making aimed at expanding businesses to new locations (Peari, 2023). Given this, the following hypothesis was developed:

H5: The higher the health indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil, as shown in Figure 1.

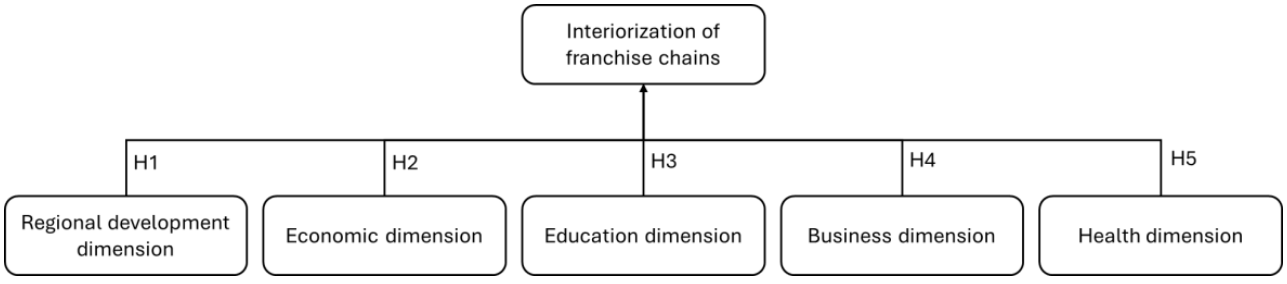

Figure 1. Research framework.

3. METHODOLOGY

The research carried out was quantitative using secondary data. This quantitative research is significant for entrepreneurs and investors in franchise chains as it statistically presents variables that impact greater chances of inserting new franchise chains in regions far from large urban centers. Significance analyses were carried out using a regression model of the relationships between franchise chains and variables present in institutional environments in the Brazilian Central-West region.

The dependent variable is represented by the number of franchise units and the number of franchise chain brands present in the cities included in the sample since this variable can convey the region's tendency to attract franchise chains (Melo et al., 2020). The number of franchise chain brands and the number of franchise chain units were approached separately to explore each dependent variable separately, thus aiming to make inferences regarding positive or negative factors and their significance in the relationships analyzed.

The independent variables are composed of indicators that represent the dimensions related to the hypotheses (regional development, education, economy, business, and health), as shown in Table 1 and Figure 2.

3.1. Data collection

For the sample, franchise chains operating in inland areas of the Brazilian Central-West region were selected. This region was chosen because it represents a growing market, whose revenue increase for franchise chains was 12.9% in 2023, according to data from the Brazilian Franchising Association (ABF). Furthermore, Brazil is among the 10 countries with the most franchise brands as well as franchise units in the world (Associação Brasileira de Franchising, 2021).

Initially, the 100 largest franchise chains in Brazil were selected based on the ABF report, and then the presence of these chains in the Brazilian Central-West region was verified. It was then found that of these 100 largest franchise chains in Brazil, only 4 of these (Oggi Sorvetes, Dia%, Ceofood, Fiadorweb) did not have operations in the Central-West region; therefore, they were subsequently replaced by 4 more franchise chains that appear in the sequence of the largest chains in Brazil (Acium, Casa do Pão de Queijo, Farmelhor, and Mahogany) in order to verify the number of units per city of the 100 largest franchise chains in the Brazilian Central-West region.

From the selection of franchise chains, municipalities in the Central-West region with a minimum of 10,000 inhabitants were selected to determine their presence. The population selection is justified as franchise chains are more present in urban areas, with a greater concentration of population (Associação Brasileira de Franchising, 2020, 2021). In this way, 220 cities were selected, 73 in Mato Grosso, 54 in Mato Grosso do Sul, and 93 in Goiás. The federal district was not included in the sample as it was not considered an agribusiness region since its economy is basically represented by the sector of services, approximately 94% (Idecon-DF).

Data collection regarding the location of the chains was carried out through searches on their websites, applications, and searches on the Google Maps website. No data were found on the location of units in five franchise chains, which were removed from the sample. Therefore, the sample involved the 95 largest franchise chains in Brazil and 220 cities in the Brazilian Central-West region with a population above 10,000 inhabitants.

Finally, data were collected on the independent variables, which were extracted from the public websites of the Instituto Brasileiro de Geografica e Estatística (2019), the Brazilian Ministry of Education, the Central Bank of Brazil, and the Transparency Portal (Table 1).

3.2. Data analysis

For data analysis, the RStudio software (RStudio Team, 2020) was used. Univariate descriptive statistics were calculated, with mean and standard deviation (SD), minimum and maximum values to inform the amplitude of the distribution, number of missing or unidentified values (NA), and measures of quartile position (Q1, Q2, and Q3) – each of them represents a position in the distribution of variables, with Q1 being the point that separates the first quarter from the other 75%, Q2 is also known as the median and separates the two halves, and Q3 separates the initial 75% of that final quarter (Sweeney et al., 2013).

Table 1. Independent variables.

Dimension	Variable	Source	Description	Authors
Regional development	HDI	IBGE	The index is composed of indicators of basic and secondary education, per capita income, and longevity, representing various aspects of the region's development.	Bălăceanu et al., (2021); Hines (2016); Muller (2016); Robles (2017)
	Population	IBGE	Total population of a municipality. The greater the population, the greater the attraction of companies to the region.	
	Demographic density	IBGE	Index that calculates the number of inhabitants per kilometer square, being a concern for entrepreneurs when opening new ventures.	
Economic	GDP	IBGE	It demonstrates information on the dynamics and economic performance of municipalities.	Henderson (2002); Melo et al. (2023); Sendra-Pons, et al. (2022); Utama et al. (2024)
	Average wage	IBGE	Indicates the economic potential of regions for consumption.	
	Number of financial institutions	Brazilian central bank	It reflects the availability of attracting financial resources as well as the financial development of the region.	
Education	Number of higher education institutions	Ministry of Education	Number of universities in a region, which is linked to the level of entrepreneurship and human capital creation	Chen et al. (2019); Cunningham and Menter (2020); Huang et al. (2023); Roy and Mukherjee (2017); Secundo et al. (2015); Zhuang and Sun (2023)
	Education rate	IBGE	Represents the percentage of people aged 6 to 14 who attend school in relation to the total number of people in the same age group. Reflects barriers to financial opportunities due to growing digital inclusion.	
Business	Number of companies	Federal government	It represents the degree of business present in this business environment. Reflects the attractive relationship between companies and the institutional environment	Galvão et al. (2020); Muller (2016)
	Employed Personnel	IBGE	Population over 14 years of age in a municipality with some type of occupation, regardless of registration.	
	Number of companies opened in 2023	Federal government	It demonstrates the degree of attractiveness of the region for new businesses.	
Health	Child mortality	IBGE	It represents a health indicator that can evaluate the development of regions in terms of their institutional qualities.	Acemoglu et al., (2001), Gadelha and Costa (2012); Viana and Elias (2007).

Before testing the hypotheses, two analyses were carried out, bivariate correlations and initial linear models. For correlations, Pearson's product-moment coefficients (r) and their respective probability values, p-value (Hair Jr. et al., 2015), were calculated, and linear models were estimated using ordinary least squares (Hair Jr. et al., 2018) with the intention of describing which selected variables could act as a proxy by performing a sensitivity analysis (Wooldridge, 2012).

After this descriptive process, the final models were estimated with the most relevant variables within each of the hypotheses. Both correlations, initial and final models, were analyzed according to the three hypothesis testing criteria, statistical significance, direction, and magnitude. Significance presents four levels of evidence, insufficient if $p > 0.05$ (.), sufficient if $p < 0.05$ (*), strong if $p < 0.01$ (**), and very strong if $p < 0.001$ (***); the direction can be positive or negative if there is significance, or neutral if there is no significance; while intensity represents the strength of association between variables – how far from zero they are. Adjusted R^2 values were also presented, which represent how much of the variability of the dependent variable was explained by the independent ones (Hair Jr. et al., 2015).

4. RESULTS ANALYSIS

The dependent variables have at least 50% of their distribution equal to 5 (Q2), which means that at least half of the agricultural municipalities have 5 chains and 5 franchise units. However, their variability is quite different – being much more significant for the number of units (SD= 52.5) than for the number of chains (SD= 14.8).

The variables of the economic dimension present lower variability than the average, while those of the business environment present the opposite – greater variability than the average. This result means that the first environment is more homogeneous than the second.

Regarding educational variables, at least 25% of municipalities have a HEI. The SD values were more than three times higher than the average, and the maximum was very different from the third quartile (Q3), and these statistics show the concentration of the majority of HEIs in a few municipalities. On the other hand, the schooling rate for children between 6 and 10 years old has statistics that point to homogeneous basic education for most municipalities.

For regional development, it is possible to describe that demographic density and population point to very heterogeneous municipalities, while the HDI shows homogeneous regional development – with 50% of municipalities between values of 0.68 and 0.72. Such homogeneity can also be observed in the health proxy, infant mortality, as shown in Table 2.

A first general result can be observed when comparing the intensity of the correlations of the two dependent variables with the others. The variables have correlation coefficients with greater intensity with the "number of units" than with the "number of chains,"

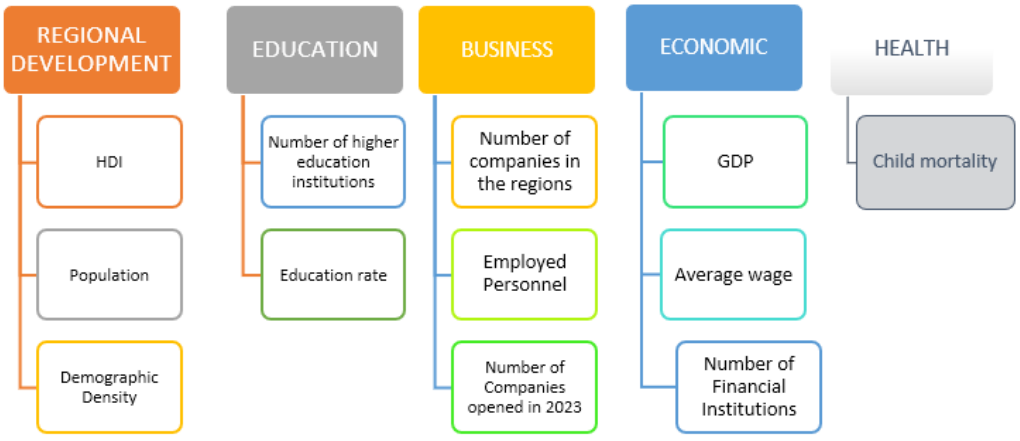

Figure 2. Institutional dimensions and their variables.

except in the case of the municipality's HDI, which is numerically a little higher, but the correlation coefficients are very close. Three variables have nonsignificant correlations with the number of units; they are municipal GDP, education rate, and child mortality. These three have very similar behavior and are not correlated with the other dependent variable, the number of chains. Some general patterns can also be observed in relation to non-significance; education rate and child mortality only show a significant correlation with two other variables, and the municipal GDP shows a significant correlation with three other variables.

The first hypothesis (H1) attests that "*The higher the regional development indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil*"; this result can be observed differently in the variables analyzed. When testing the variables in isolation, it is possible to verify a mirrored result in relation to the previous one, described in the correlation coefficients (between models M1 and M3). However, when checking the model with all variables, it is not possible to see the positive effect described in H1 for demographic density. This variable has a negative and significant relationship with the number of units ($p< 0.001$), while it is not possible to verify a non-zero relationship in the model with the dependent variable of number of chains ($p= 0.190$). Therefore, the two pieces of evidence found in this study indicate that greater demographic density is not positively associated with the attraction of franchise chains. In model M4, it is possible to note that the municipality's HDI and population are two variables that maintain the relationship described in the hypothesis ($p< 0.001$). This result may demonstrate demographic particularities in the Central-West region, signaling that demographic density is not necessarily related to the attraction of franchises. This may signal that other demographic characteristics, such as population size, are more decisive in attracting these businesses, as shown in Table 3.

Table 2. Univariate descriptive statistics of the sample.

Variables	Average	SD	Min.	Q1	Q2	Q3	Max.	NA
Dependents								
N° of units	18.00	52.50	0.00	2.00	5.00	13.00	574.00	
N° of chains	10.60	14.80	0.00	2.00	5.00	13.00	80.00	
Economic								
Municipal GDP	43556.00	29648.00	9133.00	23585.00	34728.00	54556.00	184589.00	
Average wage	2.28	0.42	1.70	2.00	2.20	2.50	4.50	
Inst. financial	6.40	5.38	1.00	4.00	5.00	7.00	56.00	
Education								
Higher education institutions	1.20	4.40	0.00	0.00	0.00	1.00	53.00	
Education rate	96.80	2.22	81.90	96.20	97.20	98.10	99.80	
Business								
Public companies	106.00	338.00	3.00	18.00	30.00	64.00	3981.00	
Active companies	6,451.00	20,252.00	361.00	1,270.00	2,122.00	4,217.00	244,773.00	
Employed Personnel	14,762.00	54,608.00	92.00	2,382.00	4,200.00	8,456.00	670,431.00	
Regional develop.								
IDHM	0.70	0.04	0.54	0.68	0.70	0.72	0.80	
Demographic density	66.00	300.00	1.00	4.00	9.00	21.00	3234.00	
Population	55,482.00	131,861.00	10,204.00	13,848.00	23,090.00	41,354.00	1,437,237.00	
Health								
Child mortality	12.70	0.29	2.30	8.10	11.60	15.00	36.40	20

The second hypothesis (H2) attests that "*The higher the economic indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil.*" The results indicate that each of the three chosen variables presents a unique result in the initial models. Municipal GDP did not show a significant relationship with the two dependent variables in the correlations, in the initial models (M1) equally, and in M4 for the number of chains (p> 0.05). However, significance was observed in model M4 when having the number of units as a dependent variable, but this relationship has a negative direction – thus, a higher GDP would be related to a smaller number of franchise units. Therefore, this is a variable that presents inconclusive results to describe hypothesis H2. The average salary has the same evidence as the correlations in model M2 (positive and significant relationship), but when testing together with the other variables, it was no longer possible to detect such an effect (p> 0.05). Therefore, it is possible to conclude that the average salary does not have a good representation of hypothesis H2. Finally, the number of financial institutions would be the variable with the strongest evidence to be a proxy for H2 since in both the correlations and the two initial models, the same result is maintained, a positive and significant relationship (p< 0.001). These results may indicate that the profile of franchise chains operating in the Central-West region may be linked to mass products for economic classes with lower salary income and GDP. This characteristic demonstrates that the franchise chains operating in this region are not necessarily aimed at consumption by higher-income classes. This may denote an expansion strategy aimed at serving a greater number of consumers with products aligned with their purchasing capacity, as shown in Table 4.

For the third hypothesis (H3), it is necessary to test "*The higher the education indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil.*" Both the schooling rate and the number of HEIs maintain the result observed in the correlations (models M1–M3). This means that the first has no significant effect (p> 0.05), unlike the second (p< 0.001). The M1 results demonstrate that the qualification of the workforce based on formal education has no impact on the installation of franchise networks in the Central-West region. When analyzing the business model of franchise chains, the pillars are the formatting of know-how and transfer of knowledge to franchise units. This feature can reduce the need for formal education of the workforce since there is a delivery of training and workforce training by the franchisor himself upon installation of the installed units, as shown in Table 5.

The fourth hypothesis (H4) to be tested posits that "The higher the business indicators, the greater the attraction of franchise chains to municipalities in the inland of Brazil." In this environment, three vari-

Table 3. Initial models with regional development variables.

Variables	M1		M2		M3		M4	
	β	sig.	β	sig.	β	sig.	β	sig.
N. of units								
Intercept	-392.90	0.000***	12.58	0.000***	-3.82	0.000***	-53.56	0.000***
HDI	587.30	0.000***					71.62	0.000***
Demographic density			0.08	0.000***			-0.02	0.000***
Population					0.00	0.000***	0.00	0.000***
R^2 adjusted	17.40%		19.20%		94.60%		96.20%	
N. of chains								
Intercept	-145.80	0.000***	9.41	0.000***	5.83	0.000***	-80.87	0.000***
HDI	223.80	0.000***					125.08	0.000***
Demographic density			0.02	0.000***			0.00	0.190
Population					0.00	0.000***	0.00	0.000***
R^2 adjusted	32.10%		13.80%		59.30%		68.10%	

ables were tested, which when tested alone have the same effect predicted in the hypothesis (models M1–M3). However, the number of open companies is not significant when tested with the others (p> 0.01), the number of active companies remains as predicted in the hypothesis, and the number of employed people is significant in the two dependent variables, but with a positive relationship in the number of units and negative number of chains. These configurations between variables present different results. However, they indicate that there is a positive correlation between companies active in the Central-West region and the attraction of franchise chains. This can demonstrate a positive business environment that can be related to a better local institutional aspect for the establishment of general businesses and franchises, as shown in Table 6.

Thus, in the initial analysis, it was possible to identify the suggestion of two variables capable of representing hypothesis H1 (Regional Development), HDI of the municipality and population; and one for H2 (Economic), the number of financial institutions. The final models point to the confirmation of these two hypotheses. The first is through the population

Table 4. Initial models with economic variables.

Variables	M1		M2		M3		M4	
	β	sig.	β	sig.	β	sig.	β	sig.
N. of units								
Intercept	18.10	0.005**	-74.27	0.000***	-41.53	0.000***	-47.20	0.000***
Municipal GDP	-9.81E-06	0.935					-1.16E-04	0.008**
Average wage			40.42	0.000***			4.99	0.124
Financial institution					9.24	0.000***	9.14	0.000***
R^2 adjusted	-0.46%		9.93%		89.60%		89.90%	
N. of chains								
Intercept	9.26	0.000***	-9.04	0.094 .	-4.11	0.000***	-0.42	0.890
Municipal GDP	0.00	0.350					0.00	0.200
Average wage			8.65	0.000***			-2.29	0.150
Financial institution					2.30	0.000***	2.35	0.000***
R^2 adjusted	-0.06%		5.53%		69.80%		69.90%	

Table 5. Initial models with education variables.

Variables	M1		M2		M3	
	β	sig.	β	sig.	β	sig.
N. of units						
Intercept	3.69	0.000***	-7.42	0.960	-6.74	0.870
Higher education institutions	11.52	0.000***			11.52	0.000***
Education rate			0.26	0.870	0.11	0.800
R^2 adjusted	93.10%		-0.45%		93.10%	
N. of chains						
Intercept	7.73	0.000***	-20.78	0.630	-20.64	0.500
Higher education institutions	2.40	0.000***			2.40	0.000***
Education rate			0.33	0.470	0.29	0.360
R^2 adjusted	50.50%		-0.22%		50.40%	

Table 6. Initial models with business variables.

Variables	M1		M2		M3		M4	
	β	sig.	β	sig.	β	sig.	β	sig.
N. of units								
Intercept	1.62	0.041*	1.24	0.077 .	3.74	0.000***	2.26	0.004**
Open company	0.15	0.000***					-0.01	0.631
Active company			0.00	0.000***			0.00	0.013*
Employed personnel					0.00	0.000***	0.00	0.003**
R^2 adjusted	95.50%		96.50%		96.40%		96.60%	
N. of chains								
Intercept	7.27	0.000***	7.26	0.000***	7.90	0.000***	5.29	0.000***
Open company	0.03	0.000***					0.02	0.327
Active company			0.00	0.000***			0.00	0.001***
Employed personnel					0.00	0.000***	-0.001	0.000***
R^2 adjusted	52.60%		51.10%		46.40%		60.00%	

($p< 0.05$), and the second is through financial institutions ($p< 0.001$); in relation to the HDI, it was not possible to observe the same result as in the initial models as there is no significance when the dependent variable is the number of units ($p> 0.1$). In general, it is possible to conclude that the greater the regional development, the greater the attraction of franchise chains for Brazilian agribusiness municipalities and that the better the economy, the greater the attraction of franchise chains for Brazilian agribusiness municipalities, which confirms hypotheses H1 and H2.

Hypothesis H3 has strong confirmation evidence in all estimated models that have the number of chains as the dependent variable. This confirmation occurs to a lesser extent when using the number of units as dependent, with some results having a weak significance (M1, M2, and M6) and one pointing to non-significance (M5). However, the signs found always have the sign described in the hypothesis, indicating that the higher the education indicators, the greater the attraction of franchise chains to Brazilian agribusiness municipalities, confirming H3.

On the other hand, the two variables that represent the business environment have inconclusive evidence. Hypothesis H4 would be confirmed by the result of the model that has the number of units as the dependent variable but rejected by the model with the number of chains. This result is supported by the variables having a significant relationship but being able to have a positive or negative influence even when analyzing the same dependent variable. The negative direction takes on the opposite meaning to that proposed in the hypothesis. This effect could come from some of the variables that end up controlling this, but when removing those with evidence of non-significance (city HDI and infant mortality), it was not possible to find the hypothesized relationship in a consistent manner. On the contrary, the coefficients of variation (β) change results when adding another variable from the same environment. Therefore, it is possible to conclude that the results described for the variables in this paragraph are inconclusive as each relationship with a dependent variable occurs differently. Therefore, H4 was not confirmed.

Finally, the evidence presented in this study points to the rejection of hypothesis H5. Since the initial results presented in the correlations, the health variable represented by infant mortality does not show sufficiently significant significance ($p> 0.05$). The same can be observed in the final models, even with the addition of other variables controlling this. Thus, H5 was not confirmed.

In conclusion, the variables used in this research managed to explain (adjusted R^2) more than 80% of the existing variability in the number of chains and more than 98% when having the number of units as the dependent variable, as shown in Table 7.

Table 7. Final models with hypothesis testing.

Variables	M1		M2		M3		M4		M5		M6	
	β	sig.	β	sig.	β	sig.	β	sig.	β	sig.	β	sig.
N. of units												
Intercept	-9.84	0.387	-13.55	0.000***	-10.02	0.337	-12.63	0.000***	-11.61	0.000***	-10.86	0.000***
HDI (H1)	-5.55	0.740			-3.95	0.801						
Population (H1)	0.00	0.022*	0.00	0.022*	0.00	0.011*	0.00	0.011*	0.00	0.000***	0.00	0.000***
Financial inst. (H2)	2.88	0.000***	2.85	0.000***	2.75	0.000***	2.72	0.000***	2.63	0.000***	2.45	0.000***
Higher educat. inst. (H3)	1.06	0.069 .	1.05	0.070 .	1.16	0.037*	1.15	0.037*	0.38	0.430	0.93	0.060 .
Active company (H4)	0.00	0.000***	0.00	0.000***	0.00	0.000***	0.00	0.000***			-0.002	0.000***
Employ. personnel (H4)									0.00	0.000***	0.00	0.000***
Child mortality (H5)	0.03	0.751	0.03	0.715								
R^2 adjusted	98.10%		98.10%		98.10%		98.10%		98.40%		98.50%	
N. of chains												
Intercept	-50.98	0.000***	-6.19	0.000***	-50.24	0.000***	-7.13	0.000 ***	-8.28	0.000***	-8.52	0.000***
HDI (H1)	66.92	0.000***			65.16	0.000***						
Population (H1)	0.00	0.000***	0.00	0.000***	0.00	0.000***	0.00	0.000 ***	0.00	0.000***	0.00	0.000***
Financial inst. (H2)	1.96	0.000***	2.41	0.000***	1.94	0.000***	2.39	0.000 ***	2.55	0.000***	2.60	0.000***
Higher educat. Inst. (H3)	1.31	0.009**	1.39	0.009**	1.36	0.005**	1.43	0.005 **	1.78	0.000***	1.61	0.001***
Active company (H4)	-0.0016	0.000***	-0.002	0.000***	-0.002	0.000***	-0.002	0.000 ***			0.00	0.200
Employ. personnel (H4)									-0.001	0.000***	-0.001	0.000***
Child mortality (H5)	-0.01	0.854	-0.05	0.444								
R^2 adjusted	82.20%		80.30%		82.20%		80.40%		83.40%		83.50%	

ep: standard error.

FINAL CONSIDERATIONS

The objective of this article was to identify which institutional dimensions are significant in the attractiveness of franchise chains in inland regions. To this end, five hypotheses were formulated, relating to the dimensions of regional development, education, business, health, and economy. The proposal of this article differs from other studies on regional development for franchises as it deals with the particularities of regions in the Central-West region of Brazil. It is a geographic region with low population density, the presence of few municipalities, and economic concentration in the agribusiness sector, with international revenue generator due to its export capacity. However, little was known about retail operations, especially franchising. This study manages to generate knowledge about some institutional variables that are correlated with the presence of franchise chains, namely population size, presence of bank branches, low dependence on formal education to qualify the workforce, and a business environment linked to private companies. These results add to the studies already carried out on the regional development of franchises in the countryside of Brazil (Melo et al., 2020, 2023, 2025). Yet, it outlines particularities of the Central-West region, as seen in the study of Rosa et al. (2024) by bringing particularities from the Northern region of Brazil.

Theoretical and practical implications

The article contributes to institutional theories, especially neo-institutionalism (Acemoglu et al., 2001; DiMaggio & Powell, 1983; North, 1990), as it offers a relevant and well-founded explanation based on an empirical analysis regarding the significance of certain factors and variables in attracting franchise chains, enabling the development of chain expansion strategies. Furthermore, this study strengthens the debate on EEs by demonstrating how different institutional dimensions interact to influence franchise attraction in less urbanized regions (Melo et al., 2025).

This discussion aligns with previous studies that suggest directing the institutional environment toward standardization, reducing the need for entrepreneurship as a necessity and fostering entrepreneurship as an opportunity-driven activity (Sendra-Pons et al., 2022). By establishing a stable institutional framework, policymakers can promote environments that not only attract franchise chains but also sustain long-term business growth. The institutional alignment suggested in this study reinforces the importance of structured regulatory environments that facilitate business expansion while reducing uncertainties for entrepreneurs. As it offers a relevant and well-founded explanation based on an empirical analysis regarding the significance of certain factors and variables in attracting franchise chains, enabling the development of chain expansion strategies.

There is also a practical contribution of the article in relation to public policies in that society's representatives can use this scientific basis to develop public policy projects that encourage the creation of new institutions or strengthen institutions to provide an environment of greater entrepreneurial attractiveness. From a policy perspective, this reinforces the need for integrated regional strategies that align franchise expansion with broader economic development initiatives, particularly in inland regions (Melo et al., 2025).

Additionally, a managerial contribution is emphasized, based on the concepts of Acemoglu et al. (2001), which refers to the expansion strategy of franchise chain owners as it allows an unequivocal vision from the institutions and their indicators of factors of positive influence on entrepreneurial activity. Furthermore, another managerial contribution involves understanding the particularities of a notable demographic region with economic potential in Brazil due to agroindustry activities. The variables analyzed can contribute to business prospecting in the Central-West region, endorsing the expansion of franchise chains to municipalities that do not yet have franchise units, as well as for franchise chains that do not yet have franchise units in the municipalities analyzed. The findings reinforce the role of institutional structures in mitigating market entry risks and fostering business confidence in inland regions (Melo et al., 2025).

Moreover, this article contributes to international public policies as the study is included among the sustainable development objectives drawn up by the United Nations (UN) aimed at Brazil, in themes that contribute to "Quality Education," the "Decent work and economic growth," "Sustainable cities and communities," "Responsible consumption and production," and "Partnerships and means of implementation."

Study limitations and future research

As limitations of this study, we have restriction of analysis of environments only to the five dimensions included in the study, restriction of analysis to selected variables, and limitation of municipalities only in the Central-West region of the country.

As future studies, we suggest research using rural municipalities from other emerging countries as a base in order to provide a comparison of significant variables; research relating institutional environments, with the presence of franchise chains, to institutional environments, without the presence of franchise chains, in order to verify factors, absent and present, in these environments; theoretical works that address the opportunity for expanding franchise chains evidenced by reducing uncertainty in the institutional environment with a focus on inland regions; comparative research on the institutional environment in the inland of Brazil with that of other emerging countries to identify similarities and differences between them and their impact on the attractiveness of franchise chains; verify these environmental variables in other Brazilian's regions, seeking to understand regional particularities in before of regional institutional constraints; and studies seeking to understand the perspectives of franchisees and consumers can be developed, given the relevance of these stakeholders for the successful expansion of franchise chains. It would be interesting for franchisees to understand the drivers behind the installation of franchise units. In turn, consumers are responsible for understanding consumption behavior and value perceptions regarding brands installed in these locations.

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